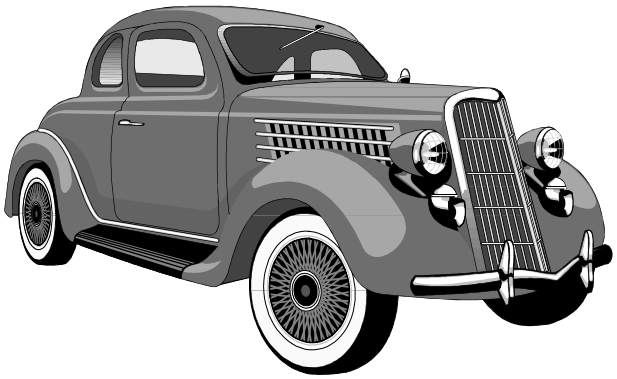

Preventing Pollution During Vehicle Salvage

A Guide to Environmental Compliance and Pollution Prevention for Vehicle Salvage Facilities in Missouri

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Technical Assistance Program
(800) 361-4827

PUB000394

Printed on recycled paper.

The information in this publication is intended as general guidance only. For specific requirements, the reader should consult the appropriate federal and state laws and rules.

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Members of Missouri Auto and Truck Recyclers assisted in the development of this document. Their help is very much appreciated.

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Technical Assistance Program
P.O. Box 176
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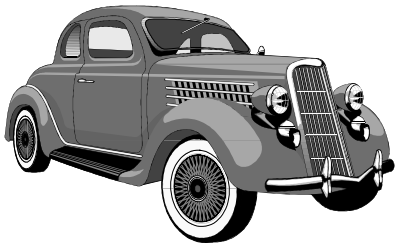

Preventing Pollution During Vehicle Salvage

- Guide Sheet #1

As environmental protection becomes more and more important across the nation, industries of every type are faced with some big questions –

What environmental regulations apply to me and my facility?
How do I comply with those regulations?
Are there things I can do to reduce the regulations I must follow?
How can I protect myself from fines and liability?
How do I protect myself and my workers from environmental hazards?

This publication can help owners and operators of vehicle salvage facilities in Missouri answer some of those questions. The guide sheets provide basic information about regulatory requirements and suggestions for protecting yourself, your workers and the environment through pollution prevention.

Each guide sheet in this publication deals with a separate issue you may face at your business. The guides will not answer every question you have. After reviewing them you should be able to decide if you need more information or assistance on a particular issue. The topics are listed on the back of this page.

The Missouri Department of Natural Resources (DNR) has a Technical Assistance Program (TAP) to help people comply with environmental regulations and find ways to prevent pollution. If you need assistance, call TAP at (800) 361-4827.

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Guide Sheets for the Vehicle Salvage Industry

404 Permits and Wetlands
Air-Conditioning Refrigerant
Antifreeze
Brake Fluid
Brake Pads and Shoes
Chemical Spills or Releases
Floor Cleaning
Fuel Tanks
Glass
Hazardous Wastes
Hoses and Gaskets
Lead-Acid Batteries
Parts Washers
Plastic
Pollution Prevention
Radiators
Scrap Metal
Shop Towels
Storage Tanks
Storm Water Permits
Used Oil Disposal and Recycling
Used Oil Filters
Used Oil Storage
Waste Tires
Waste Tire Storage
Wastewater

If you have comments or suggestions for ways to improve these guide sheets, please contact the DNR's Technical Assistance Program at (800) 361-4827.

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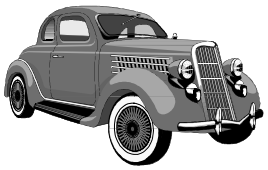
Preventing Pollution During Vehicle Salvage - Guide Sheet #2

POLLUTION PREVENTION



Vehicle salvage operations deal with many things that can affect the environment. Materials such as waste oil, antifreeze and air-conditioning refrigerant can harm the environment and people if they are not properly managed.

State and federal environmental regulations explain what legally can and cannot be done with these materials. The regulations describe how pollution or waste should be controlled, stored, treated or disposed. A better solution is to prevent the waste or pollution.

What is Pollution Prevention?
Pollution prevention is simply not making the waste or pollutant in the first place. It means doing what we can to reduce the amount and toxicity of the pollution we generate.

Preventing pollution may be something as simple as using a catch-basin to prevent spills or something as complex as redesigning your operation to increase efficiency and reduce waste. Simple things like choosing nonhazardous solvents and cleaners can protect the environment and reduce the number of environmental regulations you are faced with. Pollution prevention means thinking about the environmental impact of your actions and trying to limit that impact.

Why Prevent Pollution?
When we generate waste or pollution, we must safely and legally manage that waste or pollution. Whether it is household trash or waste from a business, managing wastes costs money. Usually the things we discard are items we bought. A good example is paper towels. We buy them, use them once, then pay again to have them disposed of.

If we reduce the amount of waste we generate, we save money. It's as simple as that. Reducing costs is a major reason to prevent pollution. Here are a few others:

- ✔ Improved work environment and worker safety.
- ✔ Reduced liability.
- ✔ Increased efficiency.
- ✔ Fewer regulatory requirements.
- ✔ Better environmental protection.

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WHAT CAN BE DONE AT VEHICLE SALVAGE OPERATIONS?

There are many ways to prevent pollution at vehicle salvage operations. Each of these guide sheets has suggestions on ways to prevent pollution. Here are a few general tips:

√ Keep work areas clean and well organized to help prevent accidents.

√ Use drip pans and splash guards where spills frequently occur.

√ Fix leaks immediately.

√ Don't buy more supplies than you need. The leftovers may become waste.

√ Purchase the largest practical container (containers usually end up as waste), but don't purchase more than you need.

√ Purchase the least toxic or hazardous product available. Check the material safety data sheets for products you purchase and keep on stock at your business. If the product is toxic or hazardous, ask your supplier for alternatives.

√ Use the oldest items first – first in, first out.

√ If you have excess or unneeded materials, see if your supplier can take them back

√ Include the cost of disposal when you make purchasing decisions. What looks like the cheapest option may cost more because of disposal or other management costs.

√ Store materials in a way that keeps them from being damaged.

√ Inspect storage areas regularly for leaks.

√ Make sure all items are clearly labeled. Store products in original containers.

√ Store wastes separately and be sure they are properly labeled to make it easier to reuse or recycle them.

√ Store items that could leak in a place where leaks will be contained and easily seen.

√ Make a list of your wastes. Then try to find a way to eliminate each of them. For example, if you throw away paper towels consider using washable shop rags.

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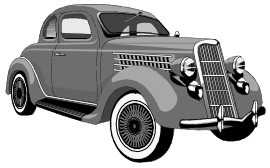
Preventing Pollution in Vehicle Salvage - Guide Sheet #3

404 PERMITS AND WETLANDS



Under Section 404(a) of the Clean Water Act, you must get a permit from the U.S. Army Corps of Engineers (Corps) before putting dredged or fill materials into any "waters of the United States" (U.S.). You might need to do this to enlarge a storage lot or processing area.

The following are not generally considered "waters of the U.S.":

- ✓ Non-tidal drainage and irrigation ditches.
- ✓ Artificially irrigated areas.
- ✓ Artificial lakes or ponds.
- ✓ Artificial reflecting or swimming pools.
- ✓ Water-filled depressions **except** that water-filled depressions such as those formed from quarrying can be waters of the U.S. if the construction or excavation operation is abandoned or completed and the body of water meets the definition of "water of the U.S." or the site has become a wetland.

The Corps and the Environmental Protection Agency (EPA) can designate a particular waterbody as a "water of the U.S." on a case by case basis.

REMEMBER

The Corps and the EPA define wetlands as "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

The Corps determines whether an area is a wetland and if an activity requires a permit. The decision is based on vegetation, soil and hydrology. Before issuing a 404 permit, the Corps will work with the Missouri Department of Natural Resources to get water quality certification for the proposed activity. The certification is called a 401 and is required under Section 401 of the Clean Water Act and state law.

Missouri is split into different U.S. Army Corps of Engineers Districts. Use the map on the back of this sheet to find out which office to contact for more assistance.

If you plan to excavate or fill in waters of the U.S., including wetlands, you must contact the U.S. Army Corps of Engineers and get any necessary permits **before** you begin.

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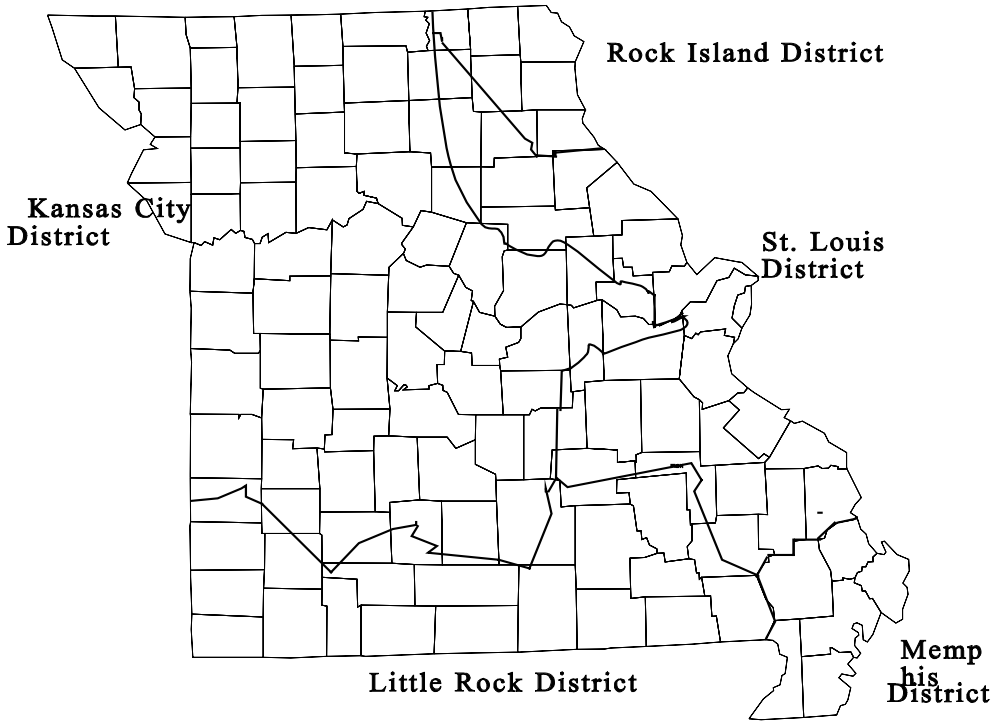
U.S. Army Corps of Engineers District Boundaries (approximate)



Kansas City District
700 Federal Building, 601 E. 12th St.
Kansas City, MO 64106-2896
(816) 983-3990

Glasgow Regulatory Field Office
(660) 338-2323
Jefferson City Regulatory Field Office
(573) 634-4788
Truman Regulatory Field Office
(660) 438-6697

Rock Island District
Box 2004, Clock Tower Building
Rock Island, IL 61204-2004
(309) 794-5370

St. Louis District
1222 Spruce Street
St. Louis, MO 63103-2833
(314) 331-8575

Little Rock District
P.O. Box 867
Little Rock, AR 72203
(501) 324-5296

Memphis District
Clifford Davis Federal Building
Room B-202
Memphis, TN 38103-1894
(901) 544-3471

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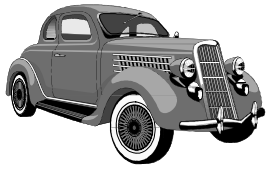
Preventing Pollution During Vehicle Salvage - Guide Sheet #4

AIR-CONDITIONING REFRIGERANT



The common refrigerant used in automotive air-conditioning (a/c) units is chlorofluorocarbon-12, also known as CFC-12, R-12, or Freon. In December 1995 production of CFC-12 in the United States ended. CFC-12 can still be used, but it is no longer produced.

CFCs are chlorine-containing compounds that react with sunlight in a way that destroys the protective ozone layer in the earth's atmosphere. This allows the amount of ultraviolet (UV) radiation reaching the earth's surface to increase. Overexposure to UV rays may cause skin cancer, eye cataracts and a weakened immune system.

If you open an a/c system, you must contain all of the refrigerant using equipment approved by the Environmental Protection Agency (EPA). This includes CFC-12 and alternative refrigerants such as HFC-134a. You must recover the refrigerant before discarding, reselling or recycling the a/c unit as part of a dismantling or crushing operation. An employee of a salvage operation who recovers refrigerant from vehicles bound for disposal does not have to be a certified technician.

Technicians servicing or repairing motor vehicle a/c systems must be trained and certified by an organization approved by EPA. This is the law according to Section 609 of the 1990 Clean Air Act Amendments.

If you do not recover the refrigerant yourself, you must keep copies of signed statements that the refrigerant was removed by someone else before you got the vehicle. When you sell recovered refrigerant, you must keep records of when, how much and to whom it was sold.

If a customer buys a salvage a/c system, you might suggest that the customer consider having the system retrofitted to use an EPA-approved alternative refrigerant. Currently hydrofluorocarbon-134a, also known as HFC-134a and R-134a, is the only alternative to CFC-12 approved by EPA and fully tested and specified by auto manufacturers in their retrofit guidelines.

HFC-134a does not contain chlorine so it does not damage the ozone layer. Some mixtures of air and HFC-134a are combustible at high pressure, so do not use compressed air to test equipment using HFC-134a.

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Recycling
When recycling refrigerant, **do not mix** CFCs and HFCs. Recycle these separately. Do not add alternate refrigerants (HFCs) to a system using CFC-12. Under federal law, recycled or reclaimed refrigerants are not hazardous if they are not mixed.

Empty Containers
It is a good idea to label empty refrigerant containers with the word "EMPTY." Check with refrigerant suppliers to see if the containers can be returned for reuse or recycling. If that is not possible, dispose of empty containers in the landfill.

Labeling
Federal law requires labeling of products containing ozone-depleting substances such as CFCs. Therefore, CFC-12 a/c units, refrigerant equipment and any containers must be labeled clearly. The label must read "WARNING Contains CFC-12, a substance which harms public health and the environment by destroying ozone in the upper atmosphere."

An a/c system retrofitted to use an alternate refrigerant must have a label telling what refrigerant is in the system.

REMEMBER

When working on an a/c unit, you must use EPA-approved recovery/recycling or recovery equipment.

Never mix CFCs (CFC-12, R-12, Freon) with HFCs (HFC-134a, R134a) either in an a/c unit or in the recovery equipment.

Label all equipment and containers that contain CFC.

POLLUTION PREVENTION
Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Recycle the existing limited supplies of CFC-12 and alternative HFC-134a.

√ Suggest the customer consider retrofitting to use an alternative refrigerant when installation of a salvage part will require totally removing the CFC-12 from the system.

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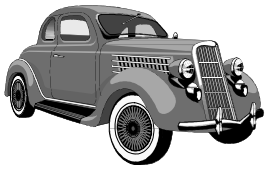
Preventing Pollution During Vehicle Salvage - Guide Sheet #5

ANTIFREEZE



Antifreeze is usually made of ethylene glycol, corrosion inhibitors and foam controllers. Ethylene glycol is toxic if ingested. It is particularly dangerous because animals and children are attracted to its sweet flavor. If they drink the ethylene glycol it may cause coma or death.

Some antifreeze is made of propylene glycol. This material is less hazardous to humans and animals than ethylene glycol.

The used antifreeze from a vehicle can hold contaminants that it has picked up from the vehicle engine. For example, used antifreeze may contain lead because the antifreeze has dissolved some of the lead solder in the radiator.

Waste antifreeze is not a listed hazardous waste under the federal hazardous waste regulations. However, it **may** be a hazardous waste depending on the contaminants it has picked up. The test used to find out if used antifreeze is a hazardous waste is called the Toxicity Characteristic Leaching Procedure (TCLP). See guide sheet #12, *Hazardous Wastes,* for more information.

Recent studies have shown that antifreeze from cars and trucks manufactured after 1995 is not hazardous waste. This is primarily because less lead is used in radiator construction. Used antifreeze is more likely to be hazardous if it was used in heavy equipment such as bulldozers and buses.

This means that antifreeze from late-model cars and trucks that has not been mixed with other antifreeze or with other hazardous wastes does not need to be tested. In this case, you may assume that it is not hazardous and need not test it. However, used antifreeze from heavy equipment or industrial sources will need to be tested to see if it is hazardous waste unless you have some other way of knowing that it is or is not hazardous.

If you wish, you can assume the antifreeze from your heavy equipment is hazardous without testing it. You would then need to dispose of it as hazardous waste.

There are several ways to safely and legally manage your used antifreeze:
✓ Recycle the antifreeze at your facility (on site recycling).
✓ Send the antifreeze to someone else to either recycle or dispose of it (off site recycling or disposal).
✓ discharge to public wastewater treatment plant **<u>if</u>** the plant has approved the discharge.

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Recycling. The Missouri Department of Natural Resources (DNR) strongly encourages antifreeze recycling. You can purchase or lease several types of antifreeze recycling equipment.

If you want to recycle your hazardous waste antifreeze on-site you must notify DNR of your recycling activities. If you recycle 2,200 lbs. or more in a month, you need a resource recovery certification. For more information, contact DNR at (800) 361-4827.

If you recycle antifreeze only from late-model cars and trucks, you do not need a resource recovery certification.

Your recycling unit will create waste such as distillation residues or used filters. You must determine if these wastes are hazardous before disposal. See guide sheet #12, *Hazardous Waste,* for more information. If the residue is nonhazardous, it can be sent to the landfill with your regular trash. However, liquids cannot go to the landfill.

There may be businesses that will bring equipment to your facility and recycle your antifreeze on-site. Again, if the antifreeze is from late model cars and trucks, these companies do not need resource recovery certification. If it is from heavy equipment or older cars, these companies will need resource recovery certification to recycle your antifreeze.

Off-site Recycling or Disposal. There are companies that pick up used antifreeze for off-site recycling or disposal. If your used antifreeze is a hazardous waste, the transporter must have a Missouri license to transport hazardous waste and the waste must have a hazardous waste manifest with it. Make sure the facility you send it to has a resource recovery certification or a hazardous waste treatment, storage and disposal permit.

Discharge to wastewater treatment plant (pouring it down the drain). If the drains at your facility go to a wastewater treatment plant (not a septic system), you may be able to pour antifreeze down the drain **IF** you have permission from the plant. Pouring wastes down the drain is called a discharge.

Some plants will not allow discharges of used antifreeze. Large quantities can harm the treatment plant. The wastewater treatment plant may not be able to remove all the contaminants from the used antifreeze. The contaminants then enter lakes, streams and rivers.

REMEMBER

✓ **DO NOT** discharge antifreeze to a wastewater plant without permission.
✓ **DO NOT** discharge any hazardous waste, including antifreeze, to a septic system.
✓ **DO NOT** dispose of antifreeze on the ground, down storm drains or into streams or lakes.

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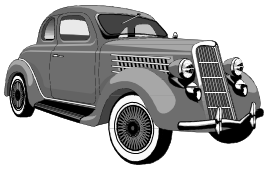
BRAKE FLUID



Brake fluid is a mixture of polyglycol and glycol ethers with additives. Since it is made from petroleum and is used for hydraulic power transmission, it is defined as used oil in Missouri.

If you generate waste brake fluid, you must handle it according to Missouri's Hazardous Waste Law and rules. Improper disposal of used brake fluid can cause damage to soil and surface water and pose a risk to human health.

In Missouri, it is against the law for anyone to dispose of brake fluid or any other used oil into the environment. That means you cannot use it to control dust or pour it out onto the ground. You cannot legally dispose of brake fluid or any other used oil in a landfill in Missouri**.**

Brake fluid, like other used oil, is regulated as a hazardous waste unless it is recycled. You may mix your waste brake fluid with your other used oil, or you may handle the wastes separately. See the guide sheet #22, *Used Oil Disposal and Recycling,* and guide sheet #12, *Hazardous Wastes,* for more information on how to manage this type of waste.

One problem that can occur is contamination of brake fluid with chlorinated compounds. Many brake cleaners or solvents contain chlorinated compounds. These can get into used brake fluid, causing it to need more expensive hazardous waste management. Some older brake fluids may have been manufactured using chlorinated compounds.

If your brake fluid contains chlorinated compounds and you mix your brake fluid with your used oil, it may be impossible to recycle your oil or use it as fuel. Check with your recycler to find out what level is unacceptable. You may wish to use a test kit to check used brake fluid for chlorinated compounds.

One way to avoid contamination is to use cleaners that do not contain chlorinated materials. If that is not possible, take care to avoid mixing the cleaning fluids with the waste brake fluid.

If you use an on-site used oil burner, check with the supplier or manufacturer to find out if burning brake fluid in the unit will cause problems. Burning glycol compounds could cause smoke or fumes. Keep track of any times brake fluid is burned in the unit to see if it causes a problem. Avoid burning the fluid in your burner if smoke or fumes result.

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REMEMBER

Used brake fluid is considered a used oil.

Used brake fluid is a hazardous waste unless it is recycled.

Check with the manufacturer of your oil burner before burning brake fluid with your used oil. Don't burn brake fluid if it creates smoke or fumes.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Carefully drain brake fluid into drip pans and prevent spillage during emptying and transfer.

√ Clean up spills as soon as possible with proper absorbent.

√ Take care not to mix chlorinated cleaners or solvents with brake fluid or used oil.

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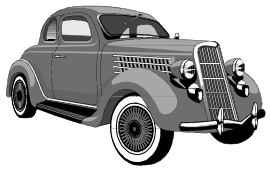
BRAKE PADS AND SHOES



Vehicle brake pads and brake shoes are commonly made with material containing asbestos. The dust that accumulates in the brake area contains very small asbestos particles. Asbestos is known to cause cancer.

The Missouri Department of Natural Resources (DNR) does not have regulations requiring you to use particular practices when dismantling brakes. You should, however, be very careful to keep asbestos-containing brake dust out of the atmosphere. Also, the Occupational Safety and Health Administration (OSHA) has regulations that may apply to you.

When you remove the brake pad or shoe from the brake, vacuum the brake dust with a HEPA-filtered vacuum or use a wet towel to wipe off the dust. A HEPA-filter is a High Efficiency Particulate Air filter. If you use a towel to wipe off the dust, put the towel in a plastic bag before discarding it. If you use a vacuum, use the vacuum and disposable bag only for brake dust. When the bag is full, seal it for disposal.

Never blow brake dust off with an air hose.

Since small asbestos particles may escape, it is a good idea to wear a breathing mask approved for filterable particulate material.

When brakes are bled, try to catch all the brake fluid. See guide sheet #6, *Brake Fluid*, for information on how to manage the waste fluid.

Keep used brake pads or shoes that you dispose of separate from your other trash. The recommended practice is to wrap the old pads or shoes in plastic bags, then put the bagged material into a sealed container. Label the container for used brake material only. The dedicated vacuum bag for brake dust should also be placed in the container.

When the container is full, notify your trash collection service that you have asbestos-containing material to be picked up. The service may want to pick up the material separately from your regular trash, depending on how the local landfill operates.

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REMEMBER

Brake pads and shoes may contain asbestos.

Dust from brakes may contain asbestos. Try to control it by using a HEPA-filtered vacuum or wet wiping the dust. Do not use an air hose.

Store asbestos waste separate from other waste.

Place asbestos waste in plastic bags, then into a sealed container and label it.

Notify your waste hauler that you have asbestos-containing waste when you are ready to dispose of it.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Don't blow brake dust into the air. Use a vacuum to collect brake dust particles and dispose of the vacuum bag, brake shoes and pads in a plastic bag.

√ When the brake system must be opened to remove parts, capture all the brake fluid and use a dedicated container so that any waste can be recycled.

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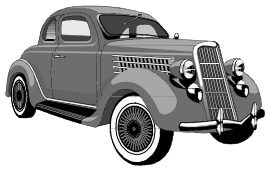
CHEMICAL SPILLS or RELEASES



Spilling oil, automotive fluids or fuel can harm the environment. Many fluids used in vehicles are petroleum products and have the same spill reporting requirements as oil and fuel. Other automotive fluids and cleaning solvents used around a shop may be contaminated by metals such as lead and cadmium or they may be listed hazardous wastes.

Be sure you put containers of automotive fluids where you can easily see spills or leaks. Put spill containment equipment near the container and be sure all employees are trained on proper use of the equipment.

Spill Prevention Control and Countermeasure (SPCC) Plan. If you store new or used oil in certain quantities or near a waterway, you must have a Spill Prevention Control and Countermeasure (SPCC) Plan. See guide sheet #20, *Storage Tanks*, for more information.

The basic requirements of an SPCC plan include what you do to prevent spills, how you plan to contain any spills and how you plan to remove and dispose of the spilled material. Also, the SPCC requires that storage tanks be in a containment area.

Reporting Spills. Spills of 25 gallons or more of petroleum products from an underground storage tank must be reported as soon as possible. If the spill is from another source, you must report spills of 50 gallons or more. If you have an oil spill of any size that reaches or threatens any waterway, including road ditches that drain to waterways, you must report it. Notify the Missouri Department of Natural Resources (DNR) by calling (573) 634-2436 as soon as possible. This is an emergency number that is answered any time of day or night.

Spills or releases of some other materials also must be reported to the emergency number. For example, a release of CFC-12 must be reported although it is not a liquid. The size of spill that requires reporting depends on the material spilled. For CFC-12, you must report if you release 5,000 pounds or more.

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You can find out the reportable quantities of chemicals by checking with your supplier or manufacturer or by contacting DNR. It is a good idea to simply contact DNR's emergency number (573-634-2436) any time you have a spill or release. DNR staff can help you find out if the spill must be reported. They can also help you figure out how to manage the spill and clean up afterward.

Managing Spills. When you have a spill, the safety of yourself and other people is the first concern. Do nothing that puts you in danger. Notify everyone in the immediate area and contact the appropriate local safety and law enforcement agencies.

If the spill is in progress and you can safely proceed, the first action to take is to stop the flow from the container. To prevent further damage, retrieve any pooled material. Sometimes this can be done by scooping out a hole in the soil or pushing in the end of a ditch. Use a pump to recover the spilled material before it can soak into the ground and place it in a container.

Absorb the remaining liquid by using kitty litter, oil dry or other absorbent materials. The liquid, absorbent and contaminated soil may be hazardous waste. DNR can advise you how to properly manage the waste.

REMEMBER

Spills must be reported to DNR as soon as possible within 24 hours.

If you store large quantities of oil or waste oil, you need a Spill Prevention Control and Countermeasure (SPCC) Plan.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Properly maintain containers and tanks to prevent corrosion.

√ Place containers and tanks where leaks can be easily contained to prevent chemicals entering the environment.

√ Inspect containers and tanks daily for leaks and spills.

√ Maintain appropriate spill containment equipment and train employees on proper use.

√ Clean up spills as soon as possible.

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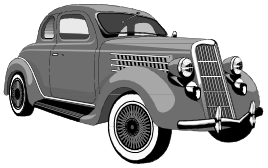
Preventing Pollution During Vehicle Salvage - Guide Sheet #9

FLOOR CLEANING



Floor cleaning at vehicle salvage operations can have an environmental impact depending on the cleaning methods used. Floor cleaning is also important from a customer relations standpoint.

The most important step in preventing environmental problems from floor cleaning is to prevent spills. Use drip pans to catch fluid spills. Place wastes to be disposed of or recycled in proper containers. If you do have a fluid spill, clean it up immediately with the appropriate absorbents.

The first cleaning step should be to sweep the floor to remove loose, dry materials. If you have allowed hazardous materials to fall on the floor, it is possible that these sweepings could be hazardous waste. For example, sludges from cooling systems may contain heavy metals such as lead. If these sludges are mixed with floor sweepings, the sweepings could be contaminated with lead.

Sweepings that are contaminated with hazardous materials will have to be tested. They will require special management and disposal if they are found to be hazardous. See guide sheet #12, *Hazardous Wastes,* for more information.

When washing the floor, do not use caustic cleansers or solvents that can cause damage to a public sewer and treatment system or to a private septic system. Biodegradable soaps are available and are usually gentler on both these systems. Be particularly cautious if your shop is not connected to a public sewer system. Septic systems can be seriously damaged by some cleaning chemicals and solvents.

If your facility is connected to a public sewer and wastewater treatment system, contact the treatment facility. Tell the facility operators about the materials you handle and ask if they can accept your wastewater. There may be local regulations restricting what you can pour down the drain and discharge into the sewer system.

Do not discharge wash water to the outdoors. If you release wastewater off your property, you could be in violation of Missouri's laws.

Avoid hosing off the floor when dry sweeping is possible. Hosing off the floor uses a great deal of water, creates a greater risk of pollution and is usually not effective for cleaning oils and greases.

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REMEMBER

If listed hazardous wastes are mixed with floor sweepings, all of the material is hazardous waste.

Contact local sewer plants to find out about local requirements for wastewater discharged to them.

Do not discharge wastewater outdoors.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Prevent spills and clean up spills immediately.

√ Pre-clean the floor with a dry broom.

√Use biodegradable soap and water to do final cleaning.

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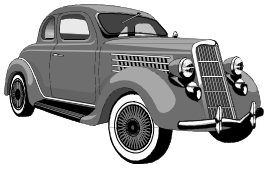
Preventing Pollution During Vehicle Salvage - Guide Sheet #10

FUEL TANKS



Used fuel tanks may present a risk of explosion or fire after being removed from motor vehicles. Most scrap metal recyclers will not accept whole tanks. Used fuel tanks will be accepted by most scrap metal recyclers if the tanks have been crushed, cut up or have holes in them.

You should prepare used fuel tanks for recycling as soon as possible after removal from the vehicle to reduce the danger of fire or explosion. Drain fuel tanks as soon as possible. Remove the in-tank fuel pump, rubber and wires. Prepare the used tank for recycling by crushing the tank carefully. Avoid any source of sparks or ignition. After you have drained and crushed the tank, it can be recycled as ordinary scrap metal.

If you must store whole, uncrushed tanks, be careful to store them safely. Do not store whole tanks in enclosed areas or near a spark or ignition source. Store whole tanks separately from other scrap metal. Although Missouri does not have environmental regulations dealing with waste fuel tanks from vehicles specifically, you should take care to manage them in a way that will not cause harm to the environment or to public health.

If you store scrap metals outside, you will need to be particularly careful. What looks like a storage pile to you may look like a dump to someone else. To avoid potential problems, be careful that other wastes are not mixed with scrap metal and set up a regular schedule for removal. Check on city and county ordinances that may have requirements for storing materials outside.

REMEMBER

Fuel tanks can explode or cause a fire if not properly handled. Always keep them away from any source of spark or flame.

If you have a scrap pile, be sure it doesn't become a dump. Set up a schedule for collection, and keep recyclable material separate from other wastes.

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POLLUTION PREVENTION

Preventing pollution, instead of treating or disposing of it, can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Drain and recycle or reuse automotive fluids any time a part is removed using dedicated drip pans and containers so that fluids do not become mixed.

√ Sort scrap metal as it is removed from vehicles and remove non-metal parts such as fuel pumps.

√ Follow a schedule for removing scrap metal piles to keep storage areas from becoming unsightly.

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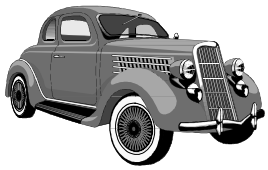
Preventing Pollution During Vehicle Salvage - Guide Sheet #11

GLASS



While dismantling vehicles, salvage operations often have waste glass from windshields or side windows. This glass is not regulated differently from other wastes; it can be discarded as nonhazardous waste at a landfill. But throwing the glass away costs you money and uses up valuable resources. A better option is to recycle the glass.

In Missouri there are presently few recyclers of automotive glass. To find recyclers in your area

✔ Check the yellow pages of the phone directory.
✔ Contact your local solid waste or public works office.
✔ Ask your trade association.
✔ Check with other businesses in your area.
✔ Call your newspaper. In some areas, the newspaper publishes lists of recyclers.

If you store glass before recycling, store it apart from other recyclable materials. Keeping other materials from mixing with the glass makes recycling easier and may increase the price the recycler pays or reduce the price the recycler charges.

If you plan to dispose of automobile glass, contact your landfill and waste hauler to see if they have any special handling requirements.

You can also reduce the amount of waste glass by careful handling of glass windows to avoid breakage and by discounting the price of parts with small defects.

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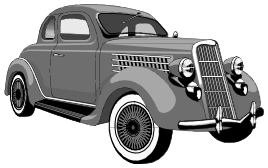
Preventing Pollution During Vehicle Salvage - Guide Sheet #12

HAZARDOUS WASTES



Note: The federal requirements for hazardous waste can be found in the *Code of Federal Regulations*, Title 40, Part 260 through Part 280 (40 CFR 260-280). The Missouri Hazardous Waste Law is in the R*evised Statutes of Missouri* (RSMo), Sections 260.350-260.552. The hazardous waste rules are in the *Code of State Regulations*, Title 10, Division 25 (10 CSR 25). To get information on the regulations, call the Missouri Department of Natural Resources (DNR) at (800) 361-4827 or the federal government's Superfund/RCRA Hotline at (800) 424-9346.

Most vehicle salvage operations generate hazardous wastes. It is very important that you find out if your wastes are hazardous and that you follow the law when managing the wastes.

What is a Hazardous Waste?

A waste is a material you no longer use and will discard. It can be a solid, liquid or gas. Hazardous wastes can be dangerous to human health and the environment. Solvents and paints are examples of wastes that could be hazardous.

It is **your** responsibility to find out if your waste is hazardous. A waste is hazardous if
✔ It is listed as a hazardous waste in the federal regulations;
✔ It exhibits a hazardous characteristic;
✔ It is a hazardous waste by Missouri law; or
✔ It is a mixture of a listed hazardous waste and any other waste.

Listed Hazardous Waste - The federal government publishes lists of hazardous wastes. There are four different lists: the F list, the K list, the P list and the U list. Wastes on the P list are called "acutely hazardous" and are regulated more strictly than other types.

Characteristic Hazardous Waste - Some wastes that are not on the lists may still be regulated hazardous wastes because they have characteristics that make them hazardous. There are four characteristics:

Ignitable - A waste with a flashpoint less than 140° F, solids that catch fire easily and burn so rapidly they create a hazard, and some compressed gasses. Some solvents are ignitable.

Corrosive - A waste with a pH less than or equal to 2.0 or greater than or equal to 12.5. An example is battery acid.

Reactive - Wastes that are normally unstable, react violently with water, can explode or release poisonous gases.

Toxic - Wastes containing certain organic chemicals, heavy metals or pesticides when tested by the Toxicity Characteristic Leaching Procedure (TCLP). The toxic chemicals listed in federal regulations.

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Missouri-specific Hazardous Waste - An individual state can regulate wastes as hazardous even if they are not on the federal list. For example, in Missouri certain dioxin wastes are regulated at smaller quantities than in the federal rules.

Mixed Waste - If you mix any waste with a waste that is on the F, P, K or U list, all of it is hazardous, even if there is only a very small amount of listed hazardous waste in the mixture.

Is Your Waste Hazardous? To find out if your waste is hazardous, check to see if it is on the lists of hazardous wastes or if it is a hazardous waste in Missouri. If it is not, you need to find out if it exhibits one or more of the hazardous characteristics. Check the material safety data sheet (MSDS) or contact your supplier for information.

If you are unsure if your waste is hazardous, you will need to have it tested in a laboratory. Contact DNR at (800) 361-4827 for help with this.

Managing Hazardous Wastes

There are very specific requirements for managing hazardous waste from your business. The requirements you must meet depend on what and how much waste you generate. You need to know how much acutely hazardous waste (P-listed) and non-acute hazardous waste you generate each month. You also need to know how much of each of these types of waste you accumulate at any one time.

Use the following information to determine your generator status. Then contact TAP or another professional environmental information source to learn the specific requirements for managing your waste.

What Type of Generator Are You?

There are three types of generators: Large Quantity Generator (LQG), Small Quantity Generator (SQG) and Conditionally Exempt Generator (CEG). Here are some general guidelines to help you decide what type of generator you are:

If you generate in one month or accumulate at any one time . . .

✔ more than 1 kg (2.2 pounds) of acutely hazardous waste you are an LQG.
✔ 1,000 kg (2,200 pounds) or more of non-acute hazardous waste you are an LQG.
✔ more than 100 kg (about 220 pounds), but less than 1,000 kg (2,200 pounds) of non-acute hazardous waste AND less than 1 kg of acutely hazardous waste you are an SQG.
✔ no more than 100 kg (220 pounds) of non-acute hazardous waste AND less than 1 kg of acutely hazardous waste you are a CEG.
✔ In Missouri, anyone generating one gram or more of dioxin waste (2,3,7,8-tetrachlorodibenzo-p-dioxin) is an LQG.

If you are a SQG or LQG you must register with DNR and get a generator identification number. You also must follow regulations on storage, transport, recordkeeping and reporting. Call DNR for more information.

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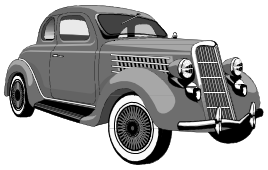
HOSES and GASKETS



When you remove parts from vehicles, the hoses and gaskets are often not reusable. Hoses and gaskets may contain residues of fluids and may need special handling. Some of these items may also be recyclable.

Used hoses may still contain some liquid such as coolant. Some gaskets may also be very wet when removed from a vehicle. Liquids cannot legally go to a landfill. If your waste container has liquid in the bottom from items such as old hoses, the waste
hauler may refuse to take it because of this restriction.

A simple way to drain hoses is to attach a clip to the shop wall in an out-of-the-way place. Making sure it is still open to the air, clip the top of the hose. Then put the bottom end into a container. Draining may take several hours or overnight. Close the containers when not draining hoses. Keep separate containers for antifreeze, used oil and any other common automotive fluids. The drained material can be added to recycling batches.

If you cannot reuse the fluid drained from hoses, you need to decide if it is hazardous waste. Hazardous wastes require special management and disposal. See guide sheet #12, *Hazardous Waste*, for more information.

REMEMBER

Liquids cannot be sent to the landfill.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Never mix fluids unless they are usually recycled together. Mixing could change a recyclable substance into a hazardous waste.

√ Do not put liquids into trash containers.

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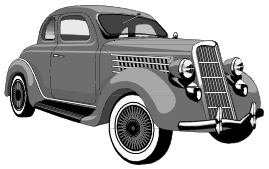
LEAD-ACID BATTERIES



(In this document the term "battery" means lead-acid battery.)

Lead-acid batteries, such as those from motor vehicles, contain acid and other materials that pose a risk to people and the environment. Missouri's Solid and Hazardous Waste Management Laws have requirements for managing waste batteries.

It is against the law for anyone to dispose of lead-acid batteries in Missouri. You must send the batteries to a recycling facility, a resource recovery facility or a permitted lead smelter. Never put batteries in your trash or dumpster. Lead-acid batteries cannot go to a landfill or burned.

If you store batteries, it must be in a way that protects human health and the environment. It is important to store batteries so that cracking and leaking is prevented. Store batteries indoors or under cover to keep them dry and prevent damage to the casings. Never store batteries near combustibles such as gasoline because of the risk of sparks caused by electrical discharge of batteries.

Store batteries so that any leaking liquid will be caught and won't go onto the ground. The liquid inside batteries is sulfuric acid and it may contain dissolved lead and cadmium. Be sure you have procedures for handling spills and leaking batteries.

Anyone handling batteries or spilled material should wear protective clothing and eyewear. If acid leaks out of the batteries, collect it and handle it as a hazardous waste. See guide sheet #12, *Hazardous Waste*, for more information.

(The part of the law dealing with lead-acid batteries is §260.260-260.266, *Revised Statutes of Missouri*.)

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REMEMBER

Don't put batteries in the trash. Batteries must go to a recycling facility, a resource recovery facility or a permitted lead smelter. They cannot go to a landfill.

Battery acid may be a hazardous waste.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Store batteries where they will not be damaged or frozen.

√ Store batteries so that leaks will be caught and contained.

√ Anchor batteries when transporting.

√ Use long-life batteries.

√ Inspect stored batteries regularly so you can find cracks or leaks before they become a problem.

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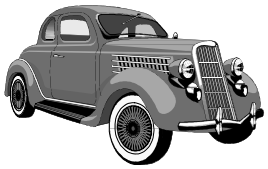
PARTS WASHERS



Various types of parts washers are available for removing dirt and lubricants. Most systems use either solvent or water-based cleaners. Depending on the cleaner used and the items being cleaned, the waste from parts washers may be hazardous.

Solvent Washers. Many people use solvents for cleaning parts. Some solvents evaporate readily and can cause air pollution problems. For this reason the use of certain solvents is restricted in some areas, such as St. Louis and Kansas City. Check with your local air pollution control office or the Missouri Department of Natural Resources (DNR) for any special requirements for your solvents.

Some solvents used in parts washers are hazardous waste when disposed. If you don't know whether your used solvent is a hazardous waste, ask your supplier or manufacturer. The material safety data sheet (MSDS) may have this information.

Even if the solvent is not hazardous waste, the used solvent can be due to contamination from the parts you clean. Your supplier may be able to provide information on typical contaminants, or you may need to have the waste solvent tested. See guide sheet #12, *Hazardous Wastes,* for more information.

Some businesses use solvent-distillation units, often called stills. These remove contaminants to recycle the solvent. If you recycle your hazardous waste solvent on-site you must notify DNR of your activities. If you recycle more than 2,200 lbs. of hazardous waste in a month, you must get a resource recovery certification from DNR. The sludge and still bottoms from these units may be hazardous waste.

Water-based Washers. Many water-based parts washers are available. Typically these are closed units which use very hot water and detergents with rust inhibitors. They work very much like home dishwashers. The units are often designed to filter oil and impurities from the water during operation.

If you have or are thinking of using this type of washer, you must still be concerned about hazardous waste issues. Contact the supplier to learn if the detergent is regulated as a hazardous waste. As with solvent units, the contamination from the parts you are cleaning could cause the waste to be hazardous. You may need to have the wastewater, filters or sludges tested to find out if they are hazardous.

If you plan to put wastewater from your parts washer down the drain, contact your

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sewer system personnel to make sure it is okay with them. If your wastewater is treated by an on-site system, such as a lagoon or septic tank, you cannot put wastewater from your business operations down the drain. You will need to contain your wastewater and dispose of it at a facility able to accept it. For this reason, it may be more costly to use a water-based parts cleaning system if your business is on a septic system. See guide sheet #27, *Wastewater,* for more information. Do not let untreated wastewater drain out on the ground or to any body of water.

REMEMBER

Solvents or detergents used in parts washers may be regulated as hazardous waste.

Contaminants from dirty parts can cause waste solvent or wastewater to be hazardous.

You must notify DNR if you recycle hazardous waste on-site. If you recycle over 2,200 lbs. in a month, you must get a resource recovery certification.

Check with your sewer plant to see if it is okay to pour wastewater from your parts cleaner down the drain.

Never drain untreated wastewater onto the ground, into storm sewers or into any body of water.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Close the lid on your parts washer and turn off the spray nozzle when not in use. This will decrease evaporation of solvent.

√ Consider a solvent distillation unit (still). These units can extend the life of the solvent, saving raw material expense and hazardous waste disposal costs.

√ Use slightly dirty solvent for initial rinsing of parts and clean solvent for final cleaning.

√ Maintain parts washers. Check to make sure seals are tight and there are no leaks.

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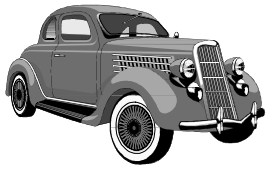
PLASTIC WASTE



Many automobile parts are made of various plastic materials. Used plastic autobody parts can be discarded as nonhazardous waste and be sent to sanitary landfills. Reducing the volume of plastic sent to landfills will reduce your operating costs.

Store plastic waste separately from scrap metal. Keep the plastic in a covered storage area to help prevent the waste pile from becoming a mosquito breeding area.

Plastic does not require special handling. It may be sent to a sanitary landfill or recycled.

Never burn plastic parts which have been removed from vehicles. A variety of plastics are used to make vehicle parts and many types give off harmful pollutants if burned. Even if you are allowed to burn residential waste in your area, you cannot burn waste from your business.

REMEMBER

Never burn plastic or any other waste from your business.

Be sure your storage areas don't become breeding places for mosquitoes. Cover stored plastic or store it indoors.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Salvage undamaged plastic parts when possible.

√ Sell parts with minor repairable defects at a discount.

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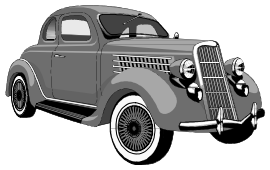
RADIATORS



Used radiators may contain materials such as lead, transmission fluid and antifreeze which are harmful to people and the environment. Metal radiators may have value as scrap metal. Radiators must be properly prepared before recycling them.

Before storing, recycling or disposing of radiators, carefully drain the liquid from the radiator. Be careful to avoid spills and to clean up any spills immediately.

Antifreeze and radiator sludge may have contaminants that cause them to be regulated as hazardous waste. Antifreeze from late-model cars or trucks (newer than about 1991) is not considered a hazardous waste in Missouri. However, antifreeze from heavy equipment or industrial sources may be regulated as a hazardous waste. See guide sheet #5, *Antifreeze,* for more information.

Sludge from radiators will very likely be hazardous waste. Be careful to manage this waste properly. See guide sheet #12, *Hazardous Wastes,* for more information.

Keep radiators which have been prepared for recycling separate from those which have not been cleaned to avoid sending dirty radiators to the scrap metal recycler.

If you store scrap metal outside, you will need to be particularly careful. What looks like a storage pile to you may look like a dump to someone else. To avoid possible problems, be careful that other wastes are not mixed with scrap metal and set up a regular schedule for removal. Check on city and county ordinances that may have requirements for storing materials outside.

REMEMBER

If you have a scrap pile, be sure it doesn't become a "dump." Set up a schedule for collection, and keep recyclable materials separate from other materials.

Never pour antifreeze, sludge or any other waste onto the ground or into storm sewers.

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POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Use dedicated drip pans and containers to collect fluids like antifreeze and transmission fluid.

√ Never mix automotive fluids or allow them to spill onto the ground.

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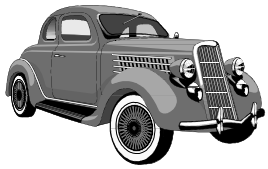
SCRAP METAL



Vehicle salvage operations deal with a variety of scrap metals. The Missouri Department of Natural Resources (DNR) encourages recycling of scrap metal. Recycling scrap metal saves energy and landfill space, reduces air pollution, water use, mining waste and consumer waste. Also, recycling metal saves money and natural resources.

Some vehicle parts such as water pumps, alternators, master cylinders and carburetors may be sold to parts remanufacturers. Remanufacturing saves even more resources than recycling. Keep parts to be remanufactured separate from other scrap metal.

Some scrap metal recyclers will pay more for catalytic converters, so you may want to keep them separate from other scrap metal. Catalytic converters from the exhaust systems of newer automobiles contain platinum, a metal with a higher value than steel.

Scrap metal recyclers usually require the scrap metal to be sorted by type. Iron and steel should be separated from other types of metal such as aluminum, brass and copper. Keep lead, such as tractor wheel weights and wheel balancing weights, separate from other metals.

If you store scrap metals outside, you will need to be particularly careful. What looks like a storage pile to you may look like a dump to someone else. To avoid potential problems, be careful that other wastes are not mixed with scrap metal and set up a regular schedule for removal. Check on city and county ordinances that may have requirements for storing materials outside.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Remove parts for remanufacture when possible.
√ Keep catalytic converters that contain platinum in a separate area.
√ Sort metals by type and schedule regular removal of scrap metal.

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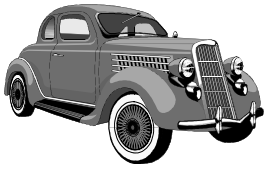
Preventing Pollution During Vehicle Salvage - Guide Sheet #19

SHOP TOWELS



Discarded shop towels or rags—either cloth or paper—may be contaminated with hazardous wastes. If they are, the towels or rags may be hazardous waste.

Some materials at your facility may be hazardous waste. Listed hazardous wastes include solvents such as methyl ethyl ketone, toluene, xylene, and others. A waste can also be hazardous if it is toxic, ignitable, reactive or corrosive. This type of waste is called a characteristic hazardous waste. See guide sheet #12, *Hazardous Waste*, for more information on what wastes are hazardous.

Any waste that is mixed with a listed hazardous waste becomes a hazardous waste. Towels with a listed hazardous waste on them become hazardous waste themselves when you discard them. The towels could also be characteristic hazardous waste, particularly if they are contaminated with metals like lead or chromium or if they can burst into flames.

The best way to deal with this issue is to prevent the problem. If you use nonhazardous cleaning solvents, the solvent won't cause the towel to become hazardous.

If used towels or rags are laundered and reused, they are not regulated as a solid waste or as a hazardous waste. You should tell your laundry what kind of chemicals are on the shop towels and make sure they can handle that type of material.

If you wash your own shop towels, be sure to check with your wastewater treatment plant to find out if they can accept the wastewater discharge you are putting down the drain. You may need to pretreat your wastewater. Do not launder contaminated shop towels if the wastewater does not go to a sewer system and treatment plant.

Do not launder towels or rags used to clean up spills of hazardous waste. If you use shop towels to clean up spills of listed hazardous waste, the shop towels are hazardous waste and must be disposed of at a permitted hazardous waste treatment, storage or disposal facility.

If you plan to throw away dirty shop towels or rags, you need to find out if they are hazardous waste. If the shop towels are hazardous, you must comply with the regulations for management, storage, transport and disposal of hazardous waste.

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If your used towels are nonhazardous, you may send them to a sanitary landfill. Landfills cannot accept liquids, so be sure to collect and use any liquid from your shop towels.

Remember that oily or solvent-soaked towels can catch fire easily. Store them safely. Some people spray the rags with water to prevent fires.

REMEMBER

Shop towels used to clean up spills of listed hazardous waste must be managed as hazardous waste.

Shop towels contaminated with hazardous waste are hazardous waste.

If dirty shop towels are laundered and reused, they are not waste. Let the laundry know what type of solvents or other material is on the dirty towels.

Don't wash your dirty shop towels unless the wastewater goes to a wastewater treatment plant. Check with staff at the treatment plant to be sure it can handle the wastewater

If you are throwing away contaminated shop towels, you must find out if they are hazardous waste and follow the regulations that apply. See guide sheet # 12, *Hazardous Waste*.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Use nonhazardous cleaners and solvents.

√ Don't use shop towels to clean up spills of hazardous materials. Use drip pans to prevent spills and appropriate absorbents for cleanup.

√ Use the least amount of solvent needed.

√ Collect and recycle solvents from contaminated shop towels. You can use a wringer to remove the liquid or simply allow the towels to drain over a container. Reuse solvents if possible.

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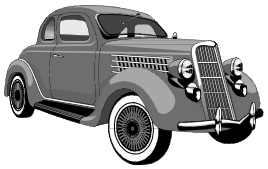
Preventing Pollution During Vehicle Salvage - Guide Sheet #20

STORAGE TANKS



Some vehicle salvage operations have storage tanks containing oil or fuel. These tanks have the potential for leaking and spilling oil or fuel, causing harm to the environment. Storage tanks, depending on size, usage or type, are regulated by several agencies.

Aboveground Storage Tanks (ASTs)
Federal law requires you to have a Spill Prevention Control and Countermeasure (SPCC) Plan if you have an oil or used oil storage tank located where it could contaminate water with spilled oil, for example on or near a stream, lake or river. You also need a SPCC plan if you have
✔any single aboveground storage container with a capacity over 660 gallons,
✔aboveground aggregate storage capacity over 1320 gallons, or
✔ total underground storage capacity over 42,000 gallons.

The basic requirements of an SPCC plan include what you do to prevent spills, how you plan to contain any spills and how you plan to remove and dispose of the oil or fuel if you have a spill. Also, the storage tanks must be in a containment area. Aboveground petroleum product storage tanks at a service station or a bulk terminal are regulated by the Missouri Department of Agriculture. If your business includes these operations contact them at

Missouri Department of Agriculture
Division of Weights and Measures
P.O. Box 630
Jefferson City, MO 65102
(573) 751-4278

Underground Storage Tanks (USTs)
If you have an underground storage tank (UST) larger than 110 gallons, you must register that tank with the Missouri Department of Natural Resources (DNR) whether or not the tank is in use. There are requirements in Missouri for the way new tanks are to be constructed and installed. Existing tanks must be upgraded to meet these requirements by December 22, 1998. If you are planning to install a new UST, you must notify DNR at least 30 days before you use the tank. All USTs must have an approved method of release detection.

You must notify DNR by calling (573) 634-2436 as soon as possible within 24 hours of a suspected release from your UST. Spills and overfills must be immediately contained and cleaned up.

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If you plan to take your UST out of service temporarily or permanently, or if you want to use it for something besides petroleum products, contact the department for information on what you need to do.

Owners and operators of petroleum USTs must demonstrate financial responsibility for releases of products from the tanks. Several options are available for demonstrating financial responsibility. Missouri has a Petroleum Storage Tank Insurance Fund, which provides for cleanup of contamination from both AST and UST releases. Your tanks may be eligible for benefits from this fund.

REMEMBER

If you have an underground storage tank larger than 110 gallons you must register it with DNR even if it isn't being used.

If you store large quantities of oil or waste oil, you need a Spill Prevention Control and Countermeasure (SPCC) Plan.

Spills must be reported to DNR as soon as possible within 24 hours.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Prevent overfilling and spilling.

√ Label tank contents to prevent mixing.

√ Properly maintain tanks to prevent corrosion.

√ Place tanks where leaks can be easily contained without entering the environment.

√ Inspect tanks daily for leaks and spills.

√ Maintain appropriate spill containment equipment and train employees on proper usage.

√ Clean up spills as soon as possible.

√ Close out unused or out-of-service USTs in accordance with DNR regulations.

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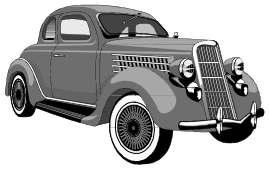
Preventing Pollution During Vehicle Salvage - Guide Sheet #21

STORM WATER PERMITS



Rainwater that falls in and around a vehicle salvage operation's outdoor storage lot or processing area can become contaminated with sediments, oil and grease. If not properly managed, contaminated water can harm the environment, pollute creeks and lakes, and even contaminate drinking water.

To prevent environmental and human health problems, the federal Clean Water Act requires a permit to discharge water that has contamination in it. This permit is called a National Pollutant Discharge Elimination System (NPDES) permit. The Missouri Department of Natural Resources (DNR) issues these permits in Missouri where they are called Missouri State Operating Permits.

You **must** apply for and obtain a Missouri State Operating Permit for storm water discharge if you own or operate a vehicle salvage or recycling operation unless

✔ You store 50 or fewer vehicles at any time and you do not process more than 50 vehicles per year or

✔ Your site is located in an area where storm sewers drain to a wastewater treatment plant. Your local public works office can tell you if your storm sewers lead to the wastewater treatment plant.

The requirements of the discharge permit are intended to minimize or prevent water pollution. In Missouri, the storm water permitting requirements are being handled in two ways: general and site-specific permits.

General Permit

General permits cover an entire industry, but the individual facility operator still must apply for it. General permits are issued statewide for periods of five years. If an individual business applies for the permit in the middle of the five-year period, they will get less than five years on their first permit.

Site-Specific Permit

When a business stores toxic materials or large amounts of potential contaminants exposed to rainfall, needs close monitoring, or is one of only a few of its kind in the state, it may need a site-specific permit.

A site-specific permit takes into account the individual characteristics of the site and the storm water runoff. In some cases, DNR may require the owner or operator of a site to apply for a site-specific permit in order to better protect water quality.

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REMEMBER

If you own or operate a motor vehicle salvage or recycling business in Missouri, you must have a Missouri State Operating Permit for your storm water discharge unless

- Your business is located in an area with combined sanitary and storm sewers.
- You store no more than 50 vehicles at a time and you process no more than 50 vehicles per year.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Your permit may require certain pollution prevention practices or even a pollution prevention plan. Here are some suggestions:

√ Prevent spills of oil, grease, gasoline, antifreeze and any other fluids.

√ Use interceptor dikes, swales or berms to direct storm water away from storage areas and areas that are prone to erosion.

√ Revegetate disturbed or bare soil areas as soon as possible.

√ Maintain appropriate spill containment equipment and train employees how to use it.

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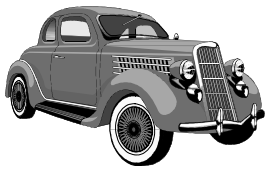
Preventing Pollution During Vehicle Salvage - Guide Sheet #22

USED OIL DISPOSAL AND RECYCLING



Improper disposal of used oil can harm the environment and result in costly cleanup. In Missouri, there are certain things you must do and certain things you must not do when managing used oil from your business.

You cannot dispose of used oil at a landfill or with your regular trash. You cannot dispose of your used oil into the environment or create a public nuisance. You cannot use used oil for dust suppression or killing weeds on gravel roads, parking lots or elsewhere. You cannot start brush or trash fires with used oil.

Used oil is regulated under the federal and state hazardous waste laws. If you recycle your used oil, it is regulated under special used oil regulations. Recycled used oil includes oil that is re-refined, reclaimed, reprocessed or burned for energy recovery. If you do not recycle your used oil, it is a hazardous waste. The waste code for used oil in Missouri is DO98. See guide sheet #12, *Hazardous Wastes*, for more information.

Off-Site Shipments of Used Oil. Anyone hauling used oil from your business must have a Missouri hazardous waste transporter license and an identification number from the U.S. Environmental Protection Agency (EPA). Contact DNR for a transporter list.

You can transport your own used oil if

- ✔ you transport 55 gallons or less at any time,
- ✔ it is your own used oil or used oil accepted from do-it-yourselfers or exempt farmers,
- ✔ you take the oil to a used oil collection center or used oil aggregation point, and
- ✔ you use your own vehicle or an employee's vehicle.

Mixing other wastes with used oil. Be very careful what you mix with used oil. You can mix certain ignitable hazardous wastes with used oil if the mixture you end up with is not ignitable. If the hazardous waste is something other than ignitable (for example if it's a listed hazardous waste), mixing it with your used oil will make your used oil a hazardous waste. For example, mixing your listed hazardous waste solvent with used oil will cause all of the oil mixture to be hazardous waste. See guide sheet #12, *Hazardous Waste*, for more information.

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On-Site Space Heaters. In your shop, you may burn your own used oil, oil from do-it-yourselfers and oil from farmers who generate less than 25 gallons per month in a specially-designed used oil space heater. The used oil space heater must have a capacity of 500,000 BTU per hour or less and be vented outside.

You do not need to notify DNR if you are burning used oil in this type of space heater. However, you must notify the department if you are collecting used oil from do-it-yourselfers or farmers. Contact DNR for more information on collecting used oil from others.

If you are a small quantity or large quantity generator of hazardous waste, you cannot burn any mixture of used oil with hazardous waste in a used oil space heater. If you are a conditionally exempt generator of hazardous waste that is hazardous only because it is ignitable, you may mix it with your used oil for burning.

Before adding anything to your used oil, check with your used oil transporter or used oil space heater manufacturer. Make sure that the practice is acceptable and will not damage your space heater or release hazardous emissions into the environment.

REMEMBER

You cannot send used oil to the landfill or pour it out onto the ground.

If you are not recycling your used oil, it is a hazardous waste.

If someone else is hauling your used oil, they must have an EPA identification number and be registered with DNR.

You may burn your own used oil in a used-oil burner smaller than 500,000 BTU/hour that is properly vented.

You may collect and burn used oil from do-it-yourselfers (DIY) or exempt farmers in your used-oil burner. Notify DNR first.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Keep used oil separate from other wastes so it can be recycled or used to heat your shop areas.
√ If you remove oil-laden parts, place them on a drip pan rather than on the floor or the ground.
√ Do not use oil drip pans to collect antifreeze or solvents.

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Preventing Pollution During Vehicle Salvage - Guide Sheet #23

USED OIL FILTERS

In the past, the majority of used oil filters were disposed of in landfills. Today, millions of filters are being recycled. Oil filters are usually made from paper, metal and rubber. Used oil filters have value because they can be burned for fuel and the metal components can be recycled. Businesses throughout the country are choosing to recycle, rather than meet minimum standards for filter disposal.

After the filter has been removed from the vehicle, you must remove residual oil before disposal or recycling. You can remove used oil from filters by

- ✔ puncturing the filter anti-drain back valve or dome end and hot-draining,
- ✔ hot draining and crushing,
- ✔ dismantling and hot-draining, or
- ✔ any other hot-draining method that will remove used oil.

To hot-drain a filter, remove the filter from the engine when the engine is hot. Then keep the filter above 60° F while it drains for 12 hours. You can send oil filters that have been hot-drained to a sanitary landfill for disposal. Collect the oil that drains from the filter and manage it properly as used oil.

Undrained oil filters must be shipped with transporters who have a Missouri Hazardous Waste Transporter's license and an identification number from the U.S. Environmental Protection Agency (EPA).

Recycling used oil filters saves natural resources and helps protect the environment. There are two ways filters are usually recycled. The entire filter can be burned for fuel, or the parts of the used filter may be separated so the scrap metal can be recycled and the paper and rubber burned as fuel.

Scrap steel processing or recycling facilities, as well as steel smelters, can recycle the metal components of the filter. Some accept whole or crushed filters, while others only accept the metal parts. Used oil filters can also be sent to industrial burners (such as cement kilns) where the entire filter or just the paper or rubber components may be burned for fuel.

There are also companies that specialize in oil filter recycling. The Filter Manufacturers Council established a Used Filter Hotline in 1994. You can call (800) 99-FILTER (993-4583) to get a list of companies that supply filter management services.

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NOTE: The legal requirements for managing used oil filters can be found in the *Code of Federal Regulations* (CFR) at 40 CFR 261.4(b)(13).

REMEMBER

Used oil filters must be properly drained before they can be recycled or sent to the landfill.

Used oil drained from filters must be collected and managed properly. See guide sheet #22, *Used Oil Disposal and Recycling*, and guide sheet # 24, *Used Oil Storage*.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ When removing the oil filter, use a drip pan under the vehicle to catch oil spills.

√ When draining filters, carefully collect the oil to avoid spills.

√ To prevent spills, put filters on a tray or in a container before moving them.

√ Store filters in a container large enough to hold any used oil that might seep from the filters. Some shops use oil filter-draining containers on wheels for clean, easy transporting.

√ Empty the mobile containers into the used oil storage container routinely to avoid an overflow.

√ Recycle used oil filters through a scrap metal or used oil filter recycler.

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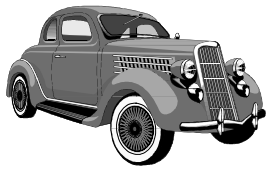
USED OIL STORAGE



Improper storage of used oil can increase the risk of spills and leaks that could harm the environment. Spills can also be expensive to clean up. In Missouri, there are some legal requirements for storing used oil from your business.

If you store used oil, you must

✔ Label or mark the storage container(s) with the words "Used Oil."

✔ Keep containers in good condition.

✔ Not store used oil collected from do-it-yourselfers longer than 12 months.

✔ Keep containers closed if they are exposed to rain or snow (except when removing or adding used oil).

✔ Inspect storage areas regularly for leaks or spills.

✔ Fix leaking containers immediately or move the oil to another container.

Although you aren't required to, you may wish to put your used oil containers in a secondary containment structure to prevent spills and contamination.

Secondary containment is a structure or container that surrounds the storage tank and can catch the liquid if the storage tank leaks. The secondary containment should have a volume at least 10 percent greater than the volume of the largest container.

If you are storing a large amount of oil (one tank over 660 gallons or a total of over 1320 gallons) you **are required** to have spill prevention measures. See guide sheet #20, *Storage Tanks*, for more information.

Your community or county may have specific requirements for storing oil. Check with local authorities, particularly your fire department.

The Missouri Department of Natural Resources (DNR) recommends not storing used oil in underground tanks.

Storing containers on an impervious surface, like sealed or treated concrete, helps contain spills and makes cleanup easier. Some businesses store their used oil containers on pallets or slightly elevated in some way to make it easier to spot spills or leaks.

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Clean up all spills immediately. Spills of over 25 gallons of used oil or other petroleum products from underground storage tanks must be reported to the DNR. Petroleum spills from any other source must be reported if the spill is over 50 gallons. However, if the petroleum spills into a waterway such as a creek, lake, river or stream, or into a ditch that drains to a waterway, it must be reported to DNR no matter how small the spill.

NOTE: The legal requirements for used oil storage can be found in the *Missouri Code of State Regulations*, 10 CSR 25, Chapter 11 and in the *Code of Federal Regulations*, 40 CFR Part 279.

REMEMBER

Label or mark storage containers and keep them in good condition.

Inspect storage areas regularly. Fix leaks immediately or move the oil to another container.

If containers are exposed to rain, keep them closed except when adding or removing used oil.

Check with local authorities to learn if there are local requirements.

Oil spills must be reported to DNR by calling (573) 634-2436.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Keep used oil separate from other wastes.

√ Have separate storage containers for antifreeze, solvents or other fluids that could accidentally be mixed with used oil.

√ Use large drum funnels or fill tubes when filling used oil drums. Store funnels on a drip pan to collect dripping oil.

√ Clean spills on a floor with a rag or mop that can be wrung-out and reused. A biodegradable soap and water solution may be used to clean up oil sheens.

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Preventing Pollution During Vehicle Salvage - Guide Sheet #25

WASTE TIRES

Tires that are too damaged or worn to use as vehicle tires are waste tires. Since 1990, the storage, hauling and disposal of waste tires have been regulated under Missouri's Solid Waste Management Law.

Storage
Waste tires must be stored in a way that does not cause pollution, health or nuisance problems. Since tires can collect water and create breeding grounds for mosquitoes, you should protect your storage area from rainwater or provide some other way to control mosquitoes. Tires may also pose a fire hazard, so they should always be stored away from ignition sources.

Tires intended for resale or retreading are not regulated as waste tires provided they have over 2/32 inch of tread. Store them separately from waste tires.

If you store 25 to 499 tires you are a waste tire collection center and must meet certain requirements. Anyone who stores 500 or more tires must have a permit from the Missouri Department of Natural Resources (DNR) as a waste tire site. See Guide Sheet #26, *Waste Tire Storage*, for more information.

Hauling
If you pay someone to haul away your waste tires, that person needs a permit from DNR. However you or other employees from your business do not need a permit to haul tires generated from your business. The tires may be hauled to a tire processor, site or end user. They may be hauled to a landfill if they are cut, chipped or shredded.

A tire hauler's permit is good for one year and only applies to the person or business to which it is issued. Check the expiration date and name on the permit to be sure it is valid. To get the list of permitted waste tire haulers or check the permit status of a hauler who picks up your tires, contact DNR at (800) 361-4827.

Recordkeeping
You must keep a record of how many tires are taken in and removed from your facility each month. Include the name of the hauler and the date the tires were removed. You may contact DNR to get a recordkeeping form.

Disposal
Never burn tires in Missouri. Even in areas where home waste burning is allowed, burning tires is prohibited.

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You cannot dispose of tires in a landfill unless the tire is cut up in at least 3 pieces of about equal size or in half circumferentially (forming two circles). Special equipment is usually needed to cut tires for disposal. There are places to legally take your waste tires in Missouri. They usually charge a fee per tire and can accept whole tires. Contact DNR for a list of sites.

Uses for Waste Tires

There are options for using waste tires rather than disposing of them. Waste tire chips can be used for many things such as mulch on playgrounds or as fuel in electrical power plants or cement kilns. Contact DNR for information on reuse and recycling options.

Sometimes a person wants a few waste tires for a home project. If someone wants to use over 100 tires in a year, they need approval from DNR. Individuals can haul their own waste tires for their own use, but you still need to keep a record of who takes your tires, when they take them and how many they take. Using tires for erosion control is not a good idea. In Missouri, you are not allowed to place tires in waters of the state. This includes streams, rivers, gullies and wet-weather creeks, among other areas.

Note: The legal requirements for waste tires can be found in §260.270-278, *Revised Statutes of Missouri (RSMo)* and in Title 10, Division 80, Chapter 8 of the *Code of State Regulations* (10 CSR 80-8).

REMEMBER

Do not burn or bury waste tires.

Waste tires cannot go to the landfill unless they are cut into three or more pieces or in half circumferentially (in two circles).

If you wish to store 25 or more waste tires, you must follow requirements for waste tire collection centers. See guide sheet #26, *Waste Tire Storage*. If you wish to store 500 or more tires, you must apply for a waste tire site or processing facility permit.

Anyone paid to haul waste tires needs a permit from DNR.

POLLUTION PREVENTION

Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ During the summer months, process and remove waste tires frequently to eliminate having to spray for mosquitoes with pesticides.
√ Sort out reusable, retreadable and bias ply tires and sell or give them to recyclers.

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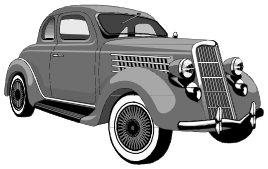
Preventing Pollution During Vehicle Salvage - Guide Sheet #26

WASTE TIRE STORAGE



In Missouri, the law requires anyone dealing with waste tires to follow certain rules. Guide sheet #25, *Waste Tires*, has general information about managing waste tires in Missouri. This guide sheet summarizes the requirements that you must meet if you have 25 to 499 tires. If you store 500 or more tires, you must have a permit from the Missouri Department of Natural Resources (DNR) as a waste tire site.

Anyone storing 25 to 499 tires in Missouri operates a waste tire collection center and must meet the following requirements.

Storage
Waste tires must be stored in a way that does not cause pollution, health or nuisance problems. If you operate a waste tire collection center, you must comply with the following:

Fire protection. You must meet local or national fire protection standards for storage of rubber tires. Contact your local fire department for information on what those requirements are. If your local fire department does not have standards for storage, follow the national standards.

Location. You cannot store your tires in a wetland, sinkhole or floodplain.

Vector control. You must store tires in a way that is unfavorable for the harboring, feeding and breeding of vectors. In other words, you must store waste tires so that mosquitoes, rats and other insects or animals do not cause a problem. To do this you must do one of the following:

1. Drain any water out of the tires or store them indoors or under cover, OR

2. Cut or alter the tires so they cannot hold water, OR

3. Treat the tires with mosquito pesticides, OR

4. Get approval from the DNR for any other method of control that you wish to use before you begin using the method.

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Recordkeeping
If you operate a waste tire collection center, you must keep certain information. You must use official recordkeeping forms available from DNR. The information you will need to put on the form includes how many tires you get in and send out each month, where the tires go, who hauled the tires, and what you do to control vectors.

To get a copy of the official form, contact DNR. You may photocopy the form. Keep your records for at least three years.

Processing
Anyone who processes waste tires for a fee must have a waste tire processing permit from DNR if more than 25 tires are on-site at any time. Processing includes shredding, cutting, chipping or otherwise altering. You do not need a permit if you or other employees from your business are processing tires generated by your vehicle maintenance business.

Disposal
Never burn tires in any part of Missouri. Even in areas where home waste burning is allowed, burning tires at home is prohibited.

You cannot dispose of tires in a landfill unless the tire is cut up into three or more pieces or in half circumferentially (cut into two circles). Special equipment is usually needed to cut tires for disposal.

NOTE: The legal requirements for waste tires can be found in §260.270-276, *Revised Statutes of Missouri* and in 10 CSR 80, Chapter 8 of the *Code of State Regulations.*

REMEMBER

Anyone storing 25 to 499 tires is a waste tire collection center and MUST meet the requirements under the law.

Do not burn or bury waste tires.

POLLUTION PREVENTION
Preventing pollution instead of treating or disposing of it can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Separate serviceable used tires and retreadable used tires from waste tires.

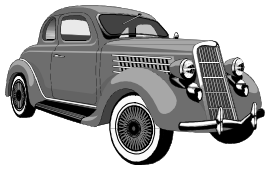
√ Be cautious when using pesticides. Follow label directions exactly and use only the amounts needed.

For more information call (800) 361-4827 or write to
Missouri Department of Natural Resources
Technical Assistance Program
P.O. Box 176
Jefferson City, MO 65102-0176

June 1998

Preventing Pollution During Vehicle Salvage - Guide Sheet #27

WASTEWATER



Vehicle salvage businesses generate wastewater during daily operations. Sources of wastewater include hot tank solutions and parts washers. These wastewaters may contain metals that can cause them to be hazardous or they may be corrosive hazardous wastes. They may also contain oils, greases, solvents and detergents.

Most communities provide sewer collection and wastewater treatment facilities. If your business is connected to a sewer and treatment plant, contact them to explain the materials you wish to dispose of in the sewer system.

You may need to pretreat the wastewater in some way before putting it in the sewer. For example, an oil/water separator or treatment for a particular contaminant may be required. By pretreating your wastewater, you help assure the community's sewer and treatment system continues working for everyone.

In areas where a wastewater treatment facility is not available or cannot take your water, you must carefully manage the wastewater from your shop. If the wastewater is hazardous, you must manage it by sending it to a permitted hazardous waste facility. See guide sheet #12, *Hazardous Wastes*, for more information.

If your wastewater is not hazardous, you can haul it to an approved wastewater treatment plant if the plant is willing to accept it. Also, if the wastewater is not hazardous, you may be able to treat it yourself. This will probably require a permit from DNR to assure that the treatment process you want to use will properly treat your wastewater.

If you cannot connect your shop to a wastewater treatment plant, you may be able to discharge domestic wastewater (water from restroom or kitchen facilities) to a septic system. On-site septic systems that treat domestic wastewater are regulated by county health departments. You will still need to collect any industrial wastewater (water from parts washers, floor cleaning, etc.) and manage it as described above. Do not put your industrial wastewater down the drain unless you are connected to a sewer and treatment plant and have permission from the plant.

Management practices that reduce, reuse and recycle the wastewater can greatly reduce your disposal costs. They will also help protect sewer systems and treatment plants. See the pollution prevention section that follows for some ideas.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Technical Assistance Program
(800) 361-4827

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REMEMBER

If your shop is connected to a sewer system and treatment plant, contact the treatment plant to find out if you can put your wastewater down the drain. You may need to pretreat your wastewater before it goes to the treatment facility.

If your shop is not connected to a sewer system and treatment plant, you can

- Get a permit from DNR to treat the wastewater yourself, OR
- Collect the industrial wastewater and determine if it is hazardous waste. If it is hazardous waste, send it to a permitted hazardous waste facility. If it is not, you can haul it to an approved wastewater treatment plant if the plant agrees to accept it.

Do not send wastewater from your shop (except restroom or kitchen waste) to a septic system.

Never let untreated wastewater from your shop go outside onto the ground, down a storm drain or into a body of water.

POLLUTION PREVENTION

Preventing pollution can save money, protect the environment and reduce risk to people. Here are some suggestions:

√ Collect and recycle petroleum-based fluids such as used oil, transmission fluid and brake fluid.

√ Collect and recycle coolants from radiators.

√ Reuse dirty rinse water as make-up water in a hot tank or jet spray washer to pre-rinse parts.

√ Use drip pans to catch leaks before they hit the floor.

√ Use absorbents to clean up minor fluid leaks and spills.

√ Sweep floors before washing them.

√ Accumulate all sludges in a closed, marked container. Determine if they are hazardous waste and dispose of properly.

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